ABSTRACT OF THE DISCLOSURE

A method and apparatus for providing welding/plasma power is disclosed. The welding/plasma power source includes an input stage, an output stage, and an energy storage device such as a capacitor. The input stage is configured to receive an ac input signal and to rectify the ac input signal to provide a rectified intermediate signal. The input stage is further configured to provide a dc voltage signal across a dc bus. The output stage is disposed to receive the dc voltage signal and is configured to provide an available output power signal suitable for welding, plasma cutting and induction heating applications. The energy storage device is connected to provide sufficient stored energy to the dc bus to allow the welding/plasma power source to run off of a generator.